



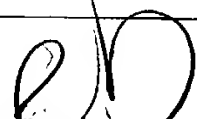
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/896,268	06/29/2001	Arne W. Ballantine	10964-057001 / PP 765	8057
26161	7590	08/09/2004	EXAMINER	
FISH & RICHARDSON PC 225 FRANKLIN ST BOSTON, MA 02110			MARTIN, ANGELA J	
			ART UNIT	PAPER NUMBER
			1745	

DATE MAILED: 08/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/896,268	BALLANTINE ET AL.	
	Examiner	Art Unit	
	Angela J. Martin	1745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,7-38 and 59-89 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,7-38 and 59-89 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This Office Action is responsive to the Amendment filed on May 20, 2004. The Applicant has amended claim 1, cancelled claims 3, 4, and 39-58, and added claims 60-89.

Claims 1, 7-38, and 59-89 are pending. However, this rejection is made non-final for the following reasons of record.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 24-38 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. In independent claim 24, the Applicant describes, "restricting coolant flow through the fuel cell stack when one or more of the monitored voltages deviates from a predetermined voltage range." However, in the specification (pp. 13-14), the Applicant describes that when the voltage decreases from a predetermined voltage range, the coolant flow is restricted. Therefore, the claim reads on positive or negative deviation, while the specification only describes a negative deviation with respect to the predetermined voltage range; the claim is broader in scope than the disclosure.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 7-10, and 23 are rejected under 35 U.S.C. 102(e) as being anticipated by Ogawa et al., U.S. Pat. Pub. No. 2001/0050191 A1.

Rejection of claims 1, 7-10, and 23 drawn to a method of operating a fuel cell system.

Ogawa et al., teach a method of operating a fuel cell system with the claim limitations of claims 1, 7-10, and 23 as presented in the prior Office Action of April 6, 2004. Additionally, it teaches the amendment of claim 1, wherein the operating parameter is a power output from the fuel cell system (p. 2, sect. 0022).

Thus, the claims are anticipated.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1,11-22, 60-89 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ogawa et al., U.S. Pat. Pub. No. 2001/0050191 A1, in view of Farkash et al., U.S. Pat. No. 6,686,080 B2.

Rejection of claims 1, 11-22, and 60-89 drawn to a method of operating a fuel cell system.

Ogawa et al., teach a method of operating a fuel cell system as described above.

Ogawa et al., do not teach the method further comprises heating the first end plate of the fuel cell stack.

Farkash et al., teach a method of operating a fuel cell system comprising heating the first end plate of the fuel cell stack (col. 4, lines 64-67); wherein heating the first end plate comprises heating a first heating element different than the first end plate and the first heating element is disposed between the first end plate and the fuel cell stack (col. 5, lines 21-23). It also teaches flowing a fluid through a flow channel defined by the first end plate, and wherein the fluid is heated (col. 9, lines 58-63). Additionally, it teaches heating the first end plate with a heating element disposed on the first end plate and wherein the heating is performed electrically (col. 5, lines 21-24). It teaches heating a second end plate associated with the stack, wherein heating the second end plate comprises heating a second heating element different than the second end plate, and wherein the second heating element is adjacent to the second end plate, or between the second end plate and stack (col. 5, lines 47-53). In addition, it teaches a method of

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operating a fuel cell system comprising monitoring an operating parameter associated with the fuel cell stack (col. 12, lines 13-26), adjusting a temperature of the stack based on the operating parameter (col. 12, lines 13-26), and wherein the operating parameter is a voltage (power output) of the fuel cell (col. 12, lines 23-25).

Thus, it would have been obvious at the time the invention was made to insert the teachings of Farkash et al., into the teachings of Ogawa et al., because while Ogawa et al., teach a method of adjusting the temperature of the fuel cell system by adjusting the coolant flow through the fuel cell stack, Farkash et al., teach adjusting the temperature of the system by controlling the heat of the end plates, which can help prevent the loss of heat from the fuel cell system at the ends of the stack and help prevent condensation of water in the fuel cell system at the end of the stacks.

Allowable Subject Matter

5. Claims 24-38 allowed.

6. The following is an examiner's statement of reasons for allowance:

The Applicant claims a method of operating a fuel cell system comprising a fuel cell stack, the method comprising monitoring voltages of a set of fuel cells and restricting coolant flow through the stack when one or more of the predetermined voltages deviated from a predetermined voltage range.

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The prior art of record does not disclose monitoring voltages of a set of fuel cells and restricting coolant flow through the stack when one or more of the predetermined voltages deviated from a predetermined voltage range.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Angela J. Martin whose telephone number is 571-272-1288. The examiner can normally be reached on Monday-Friday from 9:00 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

